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ANILINE-DERIVED LIGANDS FOR THE THYROID RECEPTOR

Abstract of the Disclosure

New thyroid receptor ligands are provided which have the general formula

$$\begin{array}{c|c} R_1 & X & R_2 \\ \hline R_7O & R_3 & N & Y-R_6 \end{array}$$

in which:

X is -0-, -S-, $-CH_2-$, -CO-, or -NH-;

10 Y is $-(CH_2)_n$ - where n is an integer from 1 to 5, or cis- or trans-ethylene;

 R_1 is halogen, trifluoromethyl, or alkyl of 1 to 6 carbons or cycloalkyl of 3 to 7 carbons;

 R_2 and R_3 are the same or different and are hydrogen, halogen, alkyl of 1 to 4 carbons or cycloalkyl of 3 to 6 carbons, at least one of R_2 and R_3 being other than hydrogen;

R₄ is hydrogen or lower alkyl;

R₅ is hydrogen or lower alkyl;

R₆ is carboxylic acid, or esters or prodrugs;

 R_7 is hydrogen or an alkanoyl or an aroyl.

In addition, a method is provided for preventing, inhibiting or treating a disease associated with metabolism dysfunction or which is dependent upon the expression of a T₃ regulated gene, wherein a compound as described above is administered in a therapeutically effective amount. Examples of such diseases associated with metabolism dysfunction or are dependent upon the expression of a T₃ regulated gene include obesity,

30 hypercholesterolemia, atherosclerosis, cardiac arrhythmias, depression, osteoporosis, hypothyroidism, goiter, thyroid cancer as well as glaucoma, congestive heart failure and skin disorders.